

### **REMARKS**

The comments of the applicant below are each preceded by related comments of the examiner (in small, bold type).

**4. Claims 1-5,12-13,17, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitecar et al. U.S. Patent 5,815,584 (hereinafter, "Whitecar").**

**Regarding claim 1, Whitecar teaches a method (see Figs. 1, 2, 3, and respective portions of the specification; col. 1, lines 34-49), comprising:**

**driving an amplifier (power amplifiers 11, 14, Fig. 1) in a predefined manner (using tone, step 60, Fig. 3; col. 4, lines 36-43),**

**sensing a change in power (by clipping detector threshold 51, Fig. 2; col. 3, lines 3-9) delivered to a power input (V\*) of the amplifier (11, 14, Fig. 1; col. 2, lines 41-52) as a result of the predefined driving (by amplifying; col. 4, lines 36-43), and**

**determining a value indicative (predetermined safe-operating-area; col. 1, lines 60-64) of a state of connection of one or more speakers (detecting improper connection of speakers, col. 1, lines 38-41) to an output of the amplifier, based on the sensed change in power (clipping, col. 4, lines 36-43).**

**Whitecar thus teaches all the claimed limitations.**

Claim 1 has been amended to include "determining a value indicative of an identification of one or more speakers connected to an output of the amplifier." This feature is described, for example, in the specification at page 13, lines 10-24:

... during operation, actual measurements of power (or current) drawn from the power supply 140 are made by test circuit 150 for an input signal of 20 KHz, and compared to the stored result. While one curve is used for one set of speakers, multiple measurements can be made for all possible combinations of speakers that will be used in system 100 so that test circuit 150 can make connectivity determinations for any of the combinations that might be used.

Whitecar senses a change in the power output (at the DC Window Comparator 48, fig. 2) or operating state (at the SOAR blocks 34-41) of the amplifier, and uses this to determine whether the speaker is shorted to battery or ground, shorted to itself, or connected properly. Whitecar does not describe and would not have made obvious "sensing a change in power *delivered* to a power input of the amplifier" (emphasis added). Moreover, Whitecar does not describe and would not have made obvious "determining a value indicative of an identification" of the connected speaker(s).

Matsuomoto, and Porambo also describe systems for identifying open or short-circuited connections to speakers. Matsuomoto measures the current input to the stereo to determine whether the speaker connections are open or short. Porambo uses a clip

detect feedback loop to detect whether the speaker connections are open or short. Neither describes or would have made obvious any way to identify the speakers.

Krochmal applies a predetermined signal to the amplifier, but it then disconnects the amplifier and measures back-EMF on the output terminal to determine whether a speaker is present. Krochmal states that its system can identify speakers based on the back-EMF, and it makes this measurement after disconnecting the amplifier (see fig. 7, steps 53-55; col. 5, ll. 11-15). Krochmal does not describe identifying speakers based on sensed change in power input when driving the amplifier in a predetermined manner.

As indicated by the examiner, Granata relates to a synchronized demodulator, and Losher relates to noise rejection. Neither relates to detecting speakers and neither describes identifying speakers.

Thus, no combination of Whitecar with any of the other cited references describes or would have made obvious identifying a speaker based on a sensed change in power delivered to an input of an amplifier.

Claims 21 and 30 have been amended similarly to claim 1 and are patentable for the same reasons as claim 1.

**2. Claims 30-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

Regarding claim 30, the claimed subject matter "computer program product tangibly embodied in an information carrier" in which "information carrier" is considered to be directed to a signal that carrying information. The signal itself is a form of energy which does not fall into the categories of "process", "machine", "manufacture" and "composition of matter". In contest, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Dependent claims 31-33 are rejected for the same reasons.

Claim 30 has been amended. The applicant reserves the right to claim an information carrier in the future if the scope of patentable subject matter is expanded.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

Please charge any additional claims fee deficiency to Bose Corporation Deposit Account No. 50-4282.

In view of the above amendment, the applicant believes the pending application is in condition for allowance.

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